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1966

macdonald **FARM** *journal*



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The Macdonald Farm Journal is published by Ronald J. Cooke Limited, also publisher of Resort Administration, 58 Madsen Ave., Beaconsfield, P.Q. • Authorized as second class mail by the Post Office Department, Ottawa, and for payment of postage in cash. Price 25 cents per copy. Subscription rates are 2.00 per year; 3.00 for two years in Canada. U.S. and Foreign: \$4.00 per year. Address subscription renewals to Macdonald Farm Journal, 58 Madsen Ave., Beaconsfield, P.Q. 697-2916.

macdonald

FARM

journal

VOLUME 27, No 7

JULY 1966

CONTENTS

INSIDE — The Editor's Column	4
AGRICULTURAL COURSES UPDATED	5
IN THE SCHOOL OF HOUSEHOLD SCIENCE	6
IN DIPLOMA COURSE	6
IN DEGREE COURSE	7
FARM ENLARGEMENT AND CONSOLIDATION	9
THE FAMILY FARM	11
THE BETTER IMPULSE	17
DOWN ON THE FARM	18
THE MONTH WITH THE W. I.	19
THE COLLEGE PAGE	22



INSIDE

THE EDITOR'S COLUMN

The New Pattern In Agricultural Education

Evolution in Universities has certain similarities to evolution in plants and animals — it proceeds by a combination of little changes taking place frequently, and giant steps, which occur rarely.

Agriculture and Home Economics have taken their second giant step, with the adoption of a curriculum geared to four years after the Parent Institutes (or Senior Matriculation) or put in another way, five years from Junior Matriculation, our present stage of admission.

This is, as we said above, our second giant step — the first was in the mid-thirties, when Dr. Brittain and his Faculty adopted the new philosophy of teaching the basic sciences first, and the agricultural or household science applications in the last two years. Many colleges of Agriculture and Home Economics in Canada and the United States are still struggling to achieve that arrangement.

For more than twenty years, the Faculty has been concerned with the fact that our curriculum has been based on four years from Junior Matriculation, with no change, in spite of the fact that the ever-increasing knowledge explosion has demanded an ever-increasing competence in our students, and an ever-increasing body of knowledge in our teaching. Some of the readjustment had been achieved by more and more specialization — but specialization can only be acquired by leaving something else out! The rest of the readjustment had been arranged by increasing the students' course load — to the point where some students were in lectures and laboratories for more than 30 hours a week, and were expected to do laboratory reports, required reading, essays, as well as study in the rest of their waking hours.

While good students respond to even excessive burdens, we did conclude that part of the relatively low survival to graduation (47%), and the relatively small percentage of students who graduated without an extra year, was due to over-loading of courses.

The possibility of a five-year curriculum, with no increase in specialization, has been attractive since the first committee report of more than twenty years ago, written by the late Professor Carl Raymond. It has become increasingly attractive with the likelihood that some version of the Parent Commission Institutes or of Senior Matriculation would soon be the rule in Quebec, as in most of the rest of Canada. This year, the Faculty of Agriculture and the School of Household Science received approval of the Senate of McGill University for its new five-year curriculum. The gestation period for this new creation has been more than twenty years, and staff members feelingly assert that every thirty years is perhaps often enough for such agonizing changes.

The new curriculum is in line with that in the other Faculties of Agriculture in Canada, that is, four years from Senior Matriculation. It has as its core the philosophy that specialization must still permit every student to take a central group of subjects considered vital to the degree — in agriculture this includes English, calculus, botany, zoology, inorganic and biochemistry, physics and biophysics, economics, genetics, statistics, animal science, plant science and soil science — with specialization in a wide range of fields built on this, with individual curricula for each major division as in the past.

(continued on page 8)

Guest editorial by H. G. Dion
Dean, Faculty of Agriculture

AGRICULTURAL COURSES UPDATED

The knowledge explosion has brought with it not only exciting new challenges for students of agricultural science, but at the same time has made necessary adjustments in the courses offered by the Faculty of Agriculture at Macdonald College. In his editorial, Dr. Dion has dealt with the philosophy underlying the changes, and in the following articles, some of the major changes are briefly outlined for the benefit of prospective students and their advisors. Full details of the courses, entrance requirements, fees will be found in the 1966-67 Announcement expected from the printers shortly. Copies will be available from the Registrar on request.

Macdonald College, which was founded and endowed by the late Sir William C. Macdonald is incorporated with McGill University, and is situated twenty miles west of Montreal, at Ste. Anne de Bellevue, Que. It is composed of the Faculty of Agriculture, which includes the School of Household Science, and the Faculty of Education, which is responsible for the professional education of teachers for the schools of Quebec.

The work of the Faculty of Agriculture falls into three main divisions: teaching, research and extension. In the teaching division three courses are offered: 1) Agriculture B. Sc (Agr) a five-year course leading to the degree of Bachelor of Science in Agriculture with specialization in one of the following options: agricultural chemistry, agricultural economics, agricultural engineering, agronomy, animal science, entomology, horticulture, plant pathology, soil science, food management and dietetics, agricultural commerce, general agricultural science, microbiology or biology. 2) Agriculture — Diploma: a two year course offering specialization in animal science, agronomy or horticulture. 3) Household Science: B. Sc. (H. Ec.) — a five year professional course leading to the degree of Bachelor of Science in Home Economics. The training enables the graduate to undertake positions in the different branches of Home Economics, including dietetics and food management, and the teaching of Home Economics in schools.

For entrance into the degree courses, the McGill School Certificate (or its equivalent) is accepted as a general standard. The candidate must have obtained 50% or more in each of ten specified papers, and a general average not less than 65%. For the Diploma course in agriculture, the Quebec High School Leaving Certificate is required.

IN THE SCHOOL OF HOUSEHOLD SCIENCE

By the Staff

This year, the School of Household Science is initiating a change to a four-year course from Senior Matriculation. To avoid hardship to those students who have no opportunity to take Senior Matriculation in High School, a qualifying year will be provided.

There is sound reasoning behind this change. Knowledge in the field of Household Science, as in other branches of science, is increasing at such a rate that education in this area must follow the modern trend for increased study time if students are to be prepared adequately for their chosen careers. Only then can they work in their chosen professions securely, confidently and with the pleasure of fulfillment.

To keep studies from becoming archaic, new courses and new materials have been added from time to time in the present course and these have become an ever-increasing burden for the student. The new curriculum will provide time which can be given to new developments in special fields but chiefly it will allow for a greater depth of study in basic sciences, humanities and social sciences. In addition it will enable the student to develop her capacity for independent thought in her chosen sphere, whether it

be dietetics, nutrition, or any of the other professions leading from Household Science.

For the student who wishes to teach, two highways to her goal will be available. She can obtain the degree of B. Sc. (H. Ec), then enter the Faculty of Education for a graduate diploma in education. This would give her a strong science background, a mastery of the field of Household Science and a specialist's certificate in education. On the other hand, if she wishes to teach another subject in addition to Home Economics and is not interested in the concentration on science which is required for the B. Sc. (H. Ec) degree, she can register in the Faculty of Education for the B. Ed. (H. Ec.) degree. Emphasis here will be on education but Home Economics courses, given by the Staff of the School of Household Science, will be offered, to equip her for this part of her profession. For students who avail themselves of "the woman's privilege of changing her mind", a transfer can be made from one course to the other.

The greater scope provided by the New Curriculum will open many new doors to graduates who even in the past have been able to fill excellent and attractive positions.

IN DIPLOMA COURSE

By Peter Y. Hamilton
Chairman of the Diploma Course Committee

Higher entrance requirements for the Diploma Course in Agriculture are in effect for the class entering this fall. This move has special significance because it has the effect of changing the status of the course from the high school or secondary level to the post high school or college level.

The educational requirements for admission which have been grade IX or the equivalent, are now grade XI with mathematics and one science subject included. The following are the requirements as they appear in the new (1966-67) College Announcement :

- 1) Students must have passed their seventeenth birthday before commencing the course.
- 2) Students should have a good practical knowledge of farming, either coming from a farm or having worked for at least one full season on an approved Eastern Canadian Farm.

Diploma Course Entrance —

- 3) The educational requirement is the Grade XI Quebec High School Leaving Certificate or its equivalent with passes in a minimum of eight papers which must include at least one mathematics and one science subject. Students of mature years who do not meet the academic requirements and who intend to make farming a career may apply for admission. Their application will be considered in an interview with the Diploma Course Committee.

A changing agriculture and a changing educational sys-

tem are responsible for the introduction of these higher entrance requirements. We will deal briefly here with three of the main reasons.

First, extensive plans are being made in the Province of Quebec to provide training in Agriculture at the high school level through the proposed Regional school system. If admission requirements to the Diploma Course were left at the grade IX level; Macdonald College would be offering agricultural training at the same high school level — a duplication which seemed unnecessary and undesirable.

Secondly, the change in entrance requirements removes problems of course content and curriculum associated with a student body of mixed educational background. The number of students entering the Diploma Course in recent years with a grade XI standing has been increasing. In the class graduating last spring only 6 of the 20 were without their high school leaving Certificate. This trend has put the teaching staff in the compromising position of attempting to up-grade the course content in line with the higher education level, and at the same time keep it so as the few without high school standing were able to cope with it with some degree of success. As long as there were students at the high school level with no other opportunities for agricultural training in Quebec, there was reason for us to live with this situation. Now with the opportunities proposed for Agricultural training by the Regional School program — a system specialized in the training of students at this level,

there is no apparent reason why the Diploma Course should attempt to take students at this level. By concentrating on the post-high school level the Diploma Course will now be able to better serve the students who meet its new requirements.

While stipulating a Quebec High School Leaving Certificate or the equivalent as the basis of entrance, the door has not been closed on the mature student who does not meet the academic requirements, but who can satisfy the Diploma Course Committee that he or she has the ability and determination to successfully cope with the course.

Thirdly, and basic to all other reasons for the higher entrance requirements is the tremendous change in Agriculture itself. Knowledge and management ability have become the keys to success in the fast changing and increasingly complex field of farming. Accordingly agricultural courses providing this knowledge and training have had to become more involved and extensive — and therefore more difficult. The training offered in the Diploma Course is designed to meet objectives like these:

- to provide the best possible training in modern agricultural practices.
- to equip students to understand the problems of agriculture and to provide the knowledge required to approach their solution intelligently.
- to prepare the student for leadership in the rural community.

It has now become obvious that students with less than a high school training are not often able to cope with the agricultural training necessary to meet these objectives.

A fast moving agriculture has meant that to meet the same objectives more training is required. The past success of the graduates of this course both in farming and in associated agricultural industry makes us anxious to maintain these same objectives. The only alternative then is to bring our course in line with the objectives and boost the entrance requirements so as the students will have the background to cope with the courses.

The change in entrance requirements will mean an upgrading in course content in a number of subjects. Course content that is at the high school level will be largely eliminated from the more academic subjects, and more time will be available to go more deeply into both the principles and practices of agriculture.

Further changes have been proposed for the Diploma Course next year — including an extension in the length of both terms of the Diploma Course year. This would have the effect of adding two months of extra training each year to the present Diploma Course.

The Diploma Course has an important place in the teaching program here at Macdonald College. With the rapid changes in agriculture and the movement taking place in the educational system of Quebec, we can expect further changes in Agricultural training at the Diploma level in the future.

IN DEGREE COURSE . . .

A FIVE-YEAR CURRICULUM

By Howard Stepler
Chairman of Revision Committee

In this business of education one is continually faced with the problem of expanding knowledge and how to fit that into the time available in which to present that knowledge. Research findings, not only in the traditional areas of agricultural research but in all of the peripheral disciplines have greatly expanded the knowledge with application to agriculture. In establishing a five-year curriculum in agriculture, we recognize that we can no longer fit that body of knowledge into the four-year program which has prevailed to date.

This extra year has not been added to the end of the four years, and by so doing permitting a greater degree of specialization, but rather has been inserted in the middle of the program immediately before the student proceeds to his area of specialization. In this way, we have broadened the base of the student's learning.

Years I and II are devoted mainly to science subjects, the conventional Chemistry, Physics, Biology, Mathematics, and with the opportunity to elect a social science, for example Geography, or a language. English is not included as a required subject at this level.

Year III presents the student with the first opportunity to direct his course of study towards his final area of specialization. Thus, in the first term of the third year, three streams appear: one leading only to Agricultural Engineering, a second one leading only to Agricultural Economics and Agricultural Commerce, and the third stream leading to all other areas of specialization, for example Animal Science, Agronomy, Microbiology, Plant Pathology, Chemistry, Soil Science, etc. In the second term of the third year, this third stream divides further so that all the students proceeding to a biological area of specialization, for example Animal Science, Agronomy, Horticulture, Entomology, Microbiology, etc., form one stream, while the other stream carries those students moving into Soil Science and Chemistry. Thus, during this third year the student can gradually narrow his choice of area of specialization and need make only broad decisions rather than the narrow, near-unreversible choices such as exist in the current curriculum.

In the fourth and fifth years the student pursues his

chosen field of specialization. Here again, one very significant difference exists. In each area of specialization, there is a core of courses which the student must take by reason of the option which he has selected — this is true of the current program. In addition, however, he has the opportunity to elect from a wide range of course offerings, courses which further his specific interest or which may, in fact, be unrelated to his area of specialization but be taken for their cultural value. Thus, he may elect, at this point, courses in English, additional courses in languages, courses in the various areas of social studies, or, if he wishes, additional mathematics, additional botany, etc. This ability to elect from this wide range of course offerings does not exist in the current four-year program.

One other very significant feature of the five-year program is the reduction in total work load in each of the senior years. This will provide the opportunity for the student to delve more deeply into the subject matter of his course work, to read more extensively in the library and, as consequence we hope, to gain a much deeper and broader understanding of his chosen subject.

A detailed examination of the new five-year curriculum will reveal that the course of study is strongly based in science. It is the firm conviction of the staff that the progress of agriculture in the future will depend solely on the application of research findings in agriculture and that that research will move further into the peripheral areas from what was traditionally considered to be agricultural research.

EDITORIAL —

(continued from page 4)

The student's life will be a happier and more successful one we hope — he will be expected to do about 40 hours a week on academic work, divided between five or five and a half courses, including lectures, laboratory periods, essays and required reading, laboratory reports etc. With the large load of extra-curricular work that most students involve themselves in (even if it's only bridge!) they will still be at least as busy as their fathers!

It should be noted that this is in fact a four-year curriculum from Senior Matriculation — the first year includes English, mathematics, physics, biology and chemistry — a science year in the high schools or in a Faculty of Arts and Science. Students will be encouraged to do their Senior Matriculation year whenever it is available to them, with the hope that as rapidly as our educational evolution in Quebec makes it possible, admission to the Faculty will be at the Senior Matriculation, or post-Institute level.

The Faculty of Agriculture and the School of Household Science have been a part of Quebec's great leap forward in education — and we have a great deal of sympathy for the difficulties of those in the educational institutions who are searching for new patterns and new answers for the problems of this new era — it takes a lot of faith to let go of the successful formula of the past!

H. G. Dion





FARM ENLARGEMENT AND CONSOLIDATION*

A summary of farm enlargement & consolidation programs now in effect in Britain, France and the Netherlands. The European experience may help in solving Canadian land-use problems.

The enlargement and consolidation of farms is occurring in all western, developed countries. In Canada, as in many European countries, farm enlargement and consolidation have taken place mainly through what might be termed natural economic evolution. This is simply one farmer adding on to his own farm, land that had been farmed by another. Farm credit programs have greatly facilitated these adjustments.

In Canada and in some European countries, this natural consolidation has been quite rapid. The number of farms in Canada, for example, declined by more than 100,000 between 1951 and 1961. This is at the rate of over 10,000 a year. The natural process of farms adjusting to new technology is likely to remain a powerful force in farm enlargement.

However, in spite of this rapid consolidation, Canada still has a large number of farms which are too small to provide operators with acceptable standards of living and from which operators sooner or later are going to want to move. The same situation has been realized in European countries, and special enlargement and consoli-

dation programs have been undertaken in France, Germany, Ireland, The Netherlands, Norway and Sweden. Proposals for a farm enlargement program have recently been made in Britain.

In considering European experience and how this might apply to Canada, the following points might be noted:

1. Farms are very much smaller in Europe and the pressure for farm enlargement is perhaps greater than in Canada. Although decline in number of farms in Canada has been less than that of the U.S., it has been more rapid than that of most European countries.
2. Consolidation in some European countries (Belgium, Netherlands, Germany and France) includes consolidation of fragmented parcels of the same farm as well as consolidation of the holdings of different owners.
3. Some European countries have a tradition of more government participation and direction in agriculture than has been the case and than might be acceptable in Canada.

Farm enlargement also refers to enlargement of the farm business. This

can and does occur within existing farm boundaries as well as with enlarging the area of a farm. The former is intensification and includes the whole technology of agriculture. To deal here primarily with programs of farm area enlargement, and particularly those programs of enlargement for small non-viable farm units, does not suggest that programs of farm intensification and adoption of technological advances on farms are of lesser importance.

Britain: The number of farms in Britain has been declining at the rate of about one per cent a year. This has been occurring without any special enlargement of farm consolidation program. However, in November, a Bill was presented to Parliament providing special measures for farm consolidation. The objective of the program is to provide increased incentives for the voluntary amalgamation of smaller farms. The main features of these plans are:

1. to enlarge farms;
2. to encourage co-operation in producing and marketing;
3. to resettle or retire from farming those who wish to do so.

Financial assistance for amalgamation will be available providing a commercial farm is produced and providing at least one holding of less than commercial standard is included in the amalgamation. A minimum-size commercial farm is defined as one which provides full-time work for two men (600 man-days per year). The grant would not apply towards the cost of buying the land for amalgamation because of inflationary effects.

Another feature of the farm enlargement program is that the Government would buy land suitable for eventual amalgamation with other land. In such a case, the selling farmer could continue to occupy the farm house.

A special program was proposed for the Hills and Uplands where economic and social conditions are more severe than elsewhere. For these areas the government proposed the establishment of regional development boards which would provide coherent planning in the use of land, not only for agriculture and forestry, but also for other purposes such as recreation and tourism.

The final feature of the farm enlargement and consolidation program is encouragement to co-operative production and marketing. Co-operation has made some progress among larger farmers but the government considered that smaller farmers had even more to gain from co-operation in production and in buying or selling on a bigger scale. Although there are a large number of buying and selling co-operatives in Britain, there are very few fully integrated

production co-operatives. In addition, there are about 1,000 farm machinery syndicates which own and use machinery co-operatively. The Government considers that co-operation can and should make a much bigger contribution to increasing agricultural productivity through economies in production as well as in the marketing of farm products.

France: The farm enlargement and consolidation program in France derives its authority from the 1960 law on agricultural guidance which laid down the objective of parity between agriculture and other economic sectors. The emphasis was placed on increased labor productivity in agriculture since price and market policies had proved inadequate as a remedy for low farm incomes.

There were several parts to this program. One feature was that the Minister of Agriculture arrange for a series of studies by natural region and by type of farm to assess the size of farm which could be worked by two men. Such an assessment was to permit the rational use of capital and technology, and to provide for satisfactory returns to labor and management as well as fixed and operating capital.

The second feature of this program was regional action. Plans were developed for each region depending on the problems and possibilities in those regions. The law provided for the establishment of special rural action areas in rural regions where economic development was inadequate. These areas were to be given priority for investment and measures which would encourage industrial development.

The third feature of the plan was structural reform. France has fragmented holdings as well as farms which are too small. Farm enlargement is sought through Land Improvement and Rural Equipment Societies (SAFER), set up by the 1960 law. These societies were given responsibility for acquiring farm land which was put up for sale, and also the right of preemption. In exercising the right of preemption, the societies may resort to the courts if the price appears to be too high. These societies may hold land for a period of up to five years in the case of agricultural land, or for ten years in the case of forest land, before reselling it. In selling land, the societies give preference to farmers whose holdings are too small. The land cannot be sold to farmers who already have holdings exceeding the maximum laid down in the legislation. 5% credit is available up to \$32,970 @ 3% of interest for these transactions.

The fourth feature of this program is a Social Action Fund for the im-

provement of agricultural structure. This provides for life pensions to old farmers who give up their farms.

The Netherlands: In the Netherlands, the number of farm holdings diminished by five per cent during the ten-year period 1950-60. In the one-to-three hectare (editors note: 1 hectare = 2.47 acres) group, the number of holdings dropped by 50% and in the three-to-five hectare group, the reduction was nearly 30%. However, the number of farmers in the ten-to-20 hectare group increased. The structural policy aims at further reduction of the agricultural labor force and a further increase in farm size. Agricultural structure policy is co-ordinated with programs of regional development to create additional employment outside of agriculture. Stress is placed on training facilities to train farm youth for non-farm jobs. Emphasis seems to be placed on developing a healthy general economy as an important means of improving agricultural structure. Government assistance in agricultural credit is given where farmers are unable to finance their needs from normal credit institutions.

There are three institutions in the Netherlands which give special assistance for improvement of farming structure. One of these, the Foundation for Land Administration, purchases land which is for sale in areas where land consolidation projects are in progress or are contemplated. This land is used for the enlargement of other farms. The foundation acquires land by purchase on the open market, by purchase of land combined with state premium for discontinuing farming, and by purchase in consolidation areas from farmers who receive a farm in the newly-claimed Zuyderzee polders.

The second institution is the Loan Guarantee Fund. This fund guarantees loans to competent farmers who are unable to secure loans from banks. Among other purposes, the loans may be used to make holdings more viable.

In 1962, a Development and Rationalization Fund was established to speed up the improvement of farm size by granting premiums for voluntary discontinuation of unprofitable holdings. A bonus of up to ten times the rental value may be paid. Another feature was added to this program in 1964 which provided that farmers of 55 years of age or more who earned less than the wage of a hired worker could get a monthly allowance for the rest of his life. The farmer must, however, stop farming and sell his farm either on the free market or to the Government. In either case, the land must be used for enlarging other farms or for non-agricultural purposes such as hous-

ing, roads, waterways, recreation etc. Pensions are on a sliding scale for ages 55 to 65 and range from slightly over the general pension at 65 to nearly double this pension. For those over 65, the general pension is increased by about one third.

Summary: Developed countries in Western Europe have a decreasing number of farms, reduced labor force and increased capital inputs in agriculture. All countries recognize that they have too many small farms. Several countries consider that the natural adjustment in farm numbers is not rapid enough. Special action programs for farm enlargement have been taken in a number of countries. In these programs, the respect for the rights of property is high. Governments generally do not have the right to dispossess farm operators. In Sweden and Iceland, the Governments have compulsory purchasing power but hardly ever use it. Powers of compulsory purchase have been given to public bodies in Finland and Ireland but only if the land is inefficiently cultivated. The more common means of acquiring land for farm consolidation and enlargement is the right of pre-emption given to public bodies. Such powers have been delegated in Denmark, Finland, Germany, Norway, Poland, Sweden and France. In Sweden, private purchasers and sellers may be refused permission to buy and sell land.

The costs incurred in amalgamation programs consisting of the difference between the purchase and selling price of land, the cost of maintaining a reserve and administrative costs are borne by the State in most of the countries concerned. Provision of a retirement income to older farmers who give up their land is part of the programs in France, Holland, Germany, Austria and Ireland, and likely will soon be a feature of Britain's program.

While effects of decentralization of industry would likely be much less than in most European countries, some of the ideas that have been adapted in Europe might be useful to Canada in the development of a farm enlargement and consolidation program.

THIS MONTH IN THE FAMILY FARM SECTION:

page 12

How to plant trees and shrubs

page 13

**Drilling of artesian wells
Advances in potato late
blight resistance**

page 14

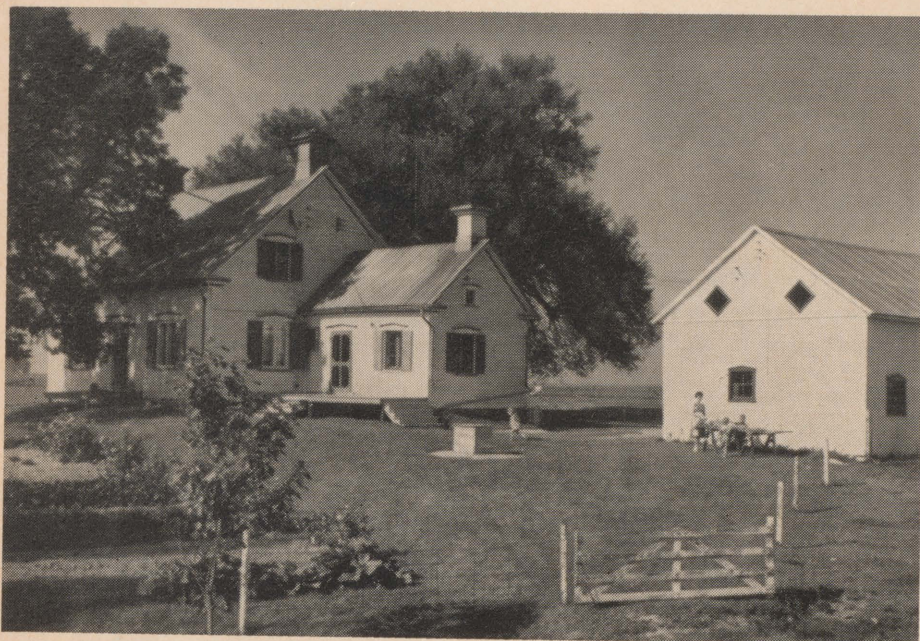
Tutira Farm

page 15

Branding by freezing

* Adapted by J. G. Brown from an address by M. E. Andal, Economics Branch, Canada Department of Agriculture, to the Farm Enlargement and Consolidation Conference, Ottawa, January 24, 1966.

Compiled by T. Pickup of the Information and Research Service,
Quebec Department of Agriculture and Colonization.



Trees and shrubs add to the tranquillity of the farm home of Mr. G. Fredette at Saint-Ours, Richelieu.

How To Plant Trees And Shrubs

From the moment it is dug up until it has been transplanted somewhere else, a tree or a shrub is very delicate and vulnerable and must be treated with great care. If it cannot be planted at once, it must be stored out of the sun in a cool place and the roots especially must be kept sheltered from sun and wind so that they will not dry out. Transplanting should be completed as soon as possible.

If transplanting has to be delayed for a few days, it is advisable to place the plants temporarily in a shallow trench (heel them in) taking care to see that the roots are covered and then copiously watered.

When to plant

Deciduous trees and shrubs may be

planted either in the fall after the leaves have started to fade, up to the end of November, or in spring from the time the ground has thawed out until growth begins. Spring planting is preferable because it gives the plants a chance to become established before they have to meet the rigours of winter.

Evergreens (pines, spruce, cedars, etc.) may be planted at the end of summer or, preferably, in spring.

Where to plant

Large trees embellish a property, give shade, and sometimes act as a windbreak. Choice of planting site will therefore depend on these purposes but trees should be placed at least twenty feet from the foundations of a building and at least forty feet from drains and septic tanks.

Shrubs are usually planted in groups along the side of a house or in a hedge, etc.

Digging the hole

The hole should be big enough to hold sufficient good soil to ensure nor-

mal growth of the plant during its early years, 2 to 3 feet across and 2 to 3 feet deep for trees, and 18 to 24 inches wide and deep for shrubs.

When digging the hole, the topsoil (about the first 8 inches) is placed apart because it is the most fertile and is subsequently put in contact with the roots during planting.

Supports

Trees which are fairly large when transplanted need a support or stake to counteract the effect of strong winds. After the plant has been set in place and the roots spread in the hole but before the soil is replaced, the stake is placed between the branches of the roots, fairly close to the trunk and between the tree and the prevailing wind.

The binding attaching the trunk to the stake should be padded to protect the bark. A piece of wire covered with a hose or several thicknesses of sacking will do.

Planting

Trees and shrubs are planted at the same depth as they were growing before being dug up, or about an inch deeper.

A mixture of one part of rotted manure to seven or eight parts of good soil should be prepared in advance. In the absence of manure, peat moss may be used at the rate of 1 part to 4 or 5 parts of a soil: addition of one or two handfuls of superphosphate will promote root growth and ensure rapid establishment.

Soils that are too heavy can be improved by addition of 30 to 50% of sand.

This enriched soil is used to put in the bottom of the hole to make a good bed for the plant, which is then placed in the hole with the roots spread. The stake is then set in place and the roots are covered with soil which is then trampled with the feet as it is added. Make sure that there is a good cushion of soil between the feet and the roots before starting to pack the soil. Finish the planting by watering well.

The best way to pack the soil and drive it into all the gaps and corners is with a water hose. To do this, fill the

(continued on page 16)

PHOTOGRAPHS BY
OMER BEAUDOIN

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

In order to solve problems of supply of drinking water on farms, the Department of Agriculture and Colonization offers farmers assistance in connection with the drilling of artesian wells.

ELIGIBILITY

Any farmer who owns or rents a farm which he cultivates is eligible for the benefits of this policy.

SUBSIDY

The Government will pay a grant of \$3.00 per foot depth on up to 300 feet of drilling, i.e. a maximum of \$900.00. The remainder of the cost of drilling and installation is to be borne by the farmer.

CONDITIONS

1. A farmer who wishes to take advantage of this assistance policy must apply to his county agronome or to the inspector at the regional administrative office.
2. The applicant is required to show that his supply of drinking water is inadequate and that the shortage



Good drinking water is a precious asset. Mr. Roy Perreault and his family of Sheenboro in Pontiac County refresh themselves at pump.

Drilling Of Artesian Wells

- cannot be remedied by ordinary methods.
3. No well shall be drilled without the written permission of the Department.
4. No farmer is entitled to more than one grant, whether the drilling was successful or not.
5. The choice of well-driller is left

(continued on page 16)

The authors are potato breeding specialists with the CDA Research Station, Fredericton, N.B.

Control of the late blight disease of potatoes with fungicides is a costly and not always dependable undertaking. Potato varieties with reliable resistance to this disease could save growers in the affected regions a large annual expenditure and thereby greatly reduce the cost of potato production.

Resistance to late blight is known to be of two types. In one, resistance is limited to particular pathogenic races of the disease-causing fungus. In the other, resistance is generalized and not specific to any race or races. Until recently, potato breeders have concentrated on producing varieties resistant to particular races of the fungus. However, the blight organism has shown itself to be extremely variable and the control achieved by breeding has proved to be transitory as each new resistant potato variety soon succumbed to a new race of the organism. For this reason, breeders have now focused their attention on resistance which is not directed against specific races of the fungus. This general type of resistance is usually known as field resistance and is present at low levels in a few commercial varieties.

(continued on page 14)

Advances In Potato Late Blight Resistance

by L. A. Dionne and W. A. Hodgson

Grégoire and Jean Pierre Thérberge lend a hand with the potato harvest on their father's farm at St-Simon, Rimouski.



LATE BLIGHT —

(continued from page 13)

eties which still require spraying to assure a satisfactory crop. A few European varieties have much higher levels of field resistance and some recently released Mexican varieties express this desirable characteristic to an even greater degree. The latter are sufficiently resistant to produce good crops under conditions where standard varieties fail to give any crop. Unfortunately, these highly resistant varieties are poorly adapted to Canadian conditions but improved strains with equal or greater resistance are being developed in Fredericton.

Our work has shown that high levels of field resistance to late blight are present in several wild potato species. However, transferring this resistance to cultivated potatoes has required new breeding techniques as well as new methods of testing the hybrids for blight resistance.

We now have exceptionally high levels of field resistance to blight in selections that have many of the attributes of commercial potatoes. These selections have high quality. They are also early and heavy yielding. Their only defect has been a susceptibility to a seed piece rot in some of the better selections. While this has never shown up in the field, it has been troublesome in the greenhouse. As this defect might be hazardous in commercial potatoes, the weakness will have to be eliminated before blight resistant varieties of this type are released.

Of the sources of blight resistance which we are using in our program, two have been of particular interest. Our most advanced material has been derived from the wild potato relative, ***Solanum demissum***, from Mexico. This species has been used by many breeders as a source of resistance to specific races of the disease-causing fungus. Unfortunately, the breeding methods previously used have not favoured retention of the high levels of field resistance which are also present in this species. New techniques have, therefore, had to be devised to permit retention of the full level of field resistance of the wild species and to combine this with desirable economic qualities.

Another species to which we are giving much attention is ***Solanum bulbocastanum***, also a native of Mexico. This species bears little resemblance to the common potato plant. It has a vine-like growth habit and small willow-like leaves. It also has small, star-shaped, creamy yellow flowers and its tubers are extremely bitter but some forms of the species are, for practical purposes,

(continued on page 16)

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

Tutira Farm



Mr. Shannon Boyd, farm superintendent, and Mr. L. G. Gibbons, estate manager on Tutira farm.

Actually five farms in one, Tutira Farm covers one thousand acres in the Arundel district of St. Jovite and is owned by businessman T. C. Stuart.

Tutira Farm actually comprises five farms covering 1,000 acres (100 of them rented) in the attractive Arundel district south of St-Jovite in the heart of the Laurentians. The owner, Mr. T. C. Stuart, is a businessman with considerable engineering interests. Owing perhaps to his professional inclinations, his interest in the farm is mainly confined to the maintenance and improvement of the buildings and machinery.

The farming enterprise itself is Mrs Stuart's concern.

On the uncultivated land, which is naturally best suited for forestry, some 35,000 trees have been planted, mostly red pine and white spruce. The arable land is used for raising beef cattle. In 1947 Mrs Stuart had a fine gabled house built of stone, and here, amid lawns and trees, she leads the life of a chateleine, though by no means aloof from

the interests of her neighbours and fellow-citizens. She is a member of the local school board and belongs to the Women's Institute. In the management of the farm she is ably assisted by Mr L. G. Gibbons, a graduate of Ontario Agricultural College.

The area under cultivation amounts to some 700 acres — 250 acres of clay soil and the rest gravelly or sandy. The whole of the main tract of land, a plateau of about 200 acres, has been subdrained. Garry oats take up 65 acres and the yield will probably be about 45 bushels to the acre. Under the nurse crop of oats there is a splendid stand of forage seedlings consisting of red clover, alsike clover, alfalfa, and Climax timothy. Twenty acres of Pride 5 corn show promise of yielding an ample crop.

Good catches of alfalfa are obtained in the hayfields but do not persist, in spite of massive applications of lime. The pastures are manured in the fall and receive 100 to 150 pounds per acre of ammonium during the growing season. In view of the importance of grasslands in the enterprise, an effort is made to increase the density of forage plants in the sward without resorting to ploughing: the land is therefore scratched with a grass harrow. Sprinkler irrigation is being tried out, starting this season, and will make it possible to revive the pastures which are feeling the effects of lack of moisture, and perhaps to get two cuts of hay. Every year the fields need 25 tons of fertilizers (8-16-16, 0-20-20, and 5-10-10).

Most of the cattle are Shorthorns. There are 210 head of this breed and also 42 head of Galloways including 2 bulls, 24 cows and 16 calves. As many cattle as possible are sold for breeding, but if an animal that is offered for sale for this purpose will not bring at least five hundred dollars it is sent to the abattoir.

The buildings are suited in quality and quantity to the scale of the undertaking. The cattle are kept under loose-housing conditions in winter except for the calves, which are housed in groups in small pens with raised floors and concrete walls four feet high. The judges were particularly interested in a pair of twin barns measuring 38 by 50: these are constructed throughout with beams and rafters of steel and sheet-metal walls and ceilings so that risk of fire is reduced to a minimum. The two barns are connected by a feed-lot equipped with two concrete bunk silos, each of them 8 feet wide at ground level, eight feet high and

Tutira Farm was carrying 210 head of Shorthorns and 42 Galloway cattle last August. The lushness of the pastures was surprising considering the dry season.

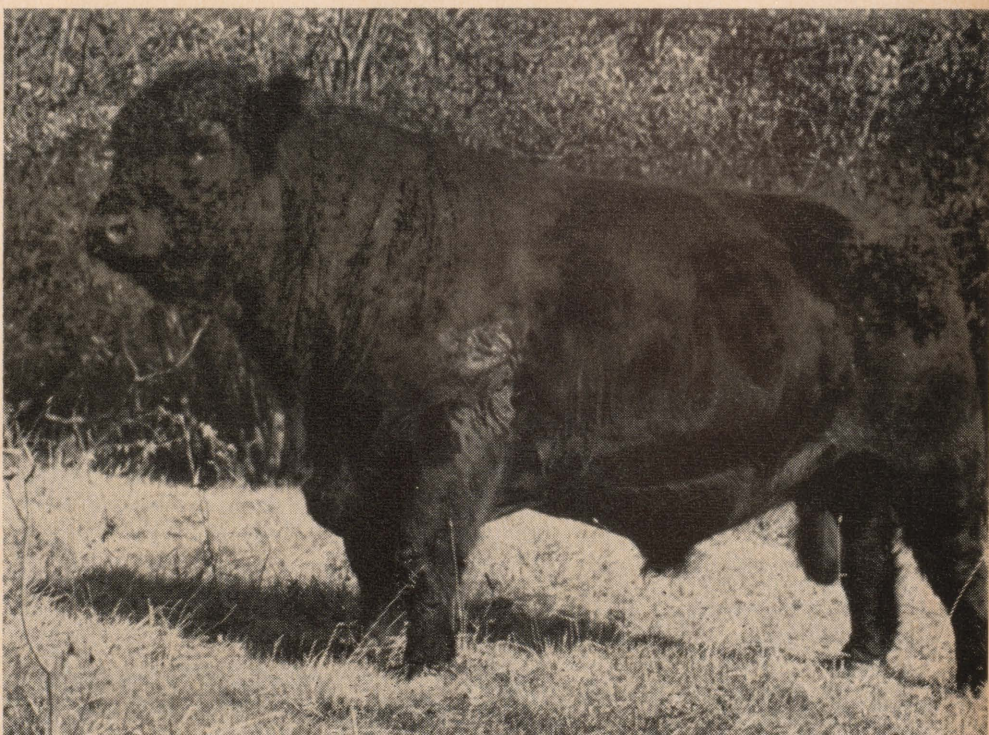


25 feet long. The feed room is a huge, lofty place containing six round, corrugated-metal, feed storage bins, 8 feet in diameter and 8 feet tall, and also the machinery for grinding and mixing.

Because Tutira Farm had produced less forage than usual, 8,000 bales of

hay had to be bought in 1964 in addition to concentrates. A similar quantity will have to be bought this year owing to an increase in the number of cattle and to the shortage due to drought.

(From the reports of the Agricultural Merit Contest for 1965)



Sires are chosen with great care on Tutira farm. Much is expected of this Galloway bull, Grange Monitor 4379, who has the reputation of the herd to uphold.

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

LATE BLIGHT —

(concluded from page 14)

immune to all races of late blight. Many breeders have tried to make use of this potentially valuable resistance but because of the remote relationship of *S. bulbocastanum* to the cultivated species, all their efforts were frustrated. This barrier has now been overcome and hundreds of hybrids derived by combining this species with commercial potatoes have been obtained. Many of the hybrids have outstanding levels of blight resistance but are still wild and will have to be improved by further crossing to good commercial varieties. The process of improving them is slow and difficult because the early crosses have produced hybrids which are very sterile. However, a solution to the sterility problem has been found and progress with this source of resistance is now expected to be much more rapid. In the meantime, several other sources of resistance are giving encouraging results for the ultimate conquest of late blight.

When the potato breeding work was initiated in Fredericton, reliable laboratory tests for assessing field resistance to late blight were not available. The seedlings had to be screened for resistance by growing them under blight epidemic conditions in the field. As this could not always be assured, special efforts were directed to devising dependable tests for measuring levels of blight resistance under laboratory conditions. The tests which resulted from this work allow us to predetermine the blight resistance of hybrid populations before they are grown in the field.

With new sources of blight resistance, new breeding techniques and new methods of testing for resistance, the outlook appears bright that Canadian farmers will, in the not too distant future, be provided with potato varieties having sufficient blight resistance to be grown with little or no spraying for late blight control.

(From "Canada Agriculture",
Spring 1966)

HOW TO —

(continued from page 12)

hole about four fifths full with soil and water thoroughly; then finish the filling without packing. It is a good idea to make a ridge of earth all round the hole. This will make a kind of saucer to hold rain and water from subsequent irrigations. Then fasten the trunk or stand to its stake as described above.

Watering

The plants will need plenty of water during the first few days following

planting and they may be practically drenched in this period. Afterwards, they should be watered sufficiently depending on the amount of rainfall. If it is rather dry they should be given a copious watering which will reach their roots, every 10 to 15 days.

Branding By Freezing

A painless method of branding livestock with intense cold, rather than with heat, has been developed by a U.S. scientist. Dr. R. K. Farrell of U.S.D.A.'s Agricultural Research Service has successfully tested freeze branding on a wide variety of animals, fish and birds. Domestic game, experimental, and marine animals have been branded.

In addition to being painless, **freeze branding causes less hide damage than hot branding.** Another advantage of freeze branding is the growth of white hair and skin at the brand site, making the brands easy to spot at long distances. The brands turn white because the extreme cold destroys the pigment producing cells (melanocytes) in the skin. There would be no advantage in branding white animals with this technique as compared with conventional branding, although the mark is distinguishable at short distances.

DRILLING —

(continued from page 13)

- to the discretion of the beneficiary.
6. The site of the well must be in conformity with the Regulations of the Provincial Department of Health (Chapter 4, section 1).
 7. The grant is payable only in the case of wells fifty feet or more in depth.
 8. The well must be at least two and three eighths inches in diameter and the casing must be of two-inch galvanized pipe (or one and twenty-nine thirty-seconds of an inch AXT-Casing) sunk to a minimum depth of six inches in the rock.
 9. If it is necessary to install an injector, the well-driller must sink the casing to at least thirty-five feet

This page supplied in the interests of the Family Farm by the Quebec Department of Agriculture and Colonization.

below the water level, regardless of the level at which the rock was reached.

10. In the case of a hammer-type driller with a diameter of four to eight inches, the casing may be of standard iron pipe sunk in the rock to a depth of not less than twelve inches or deep enough into the rock to prevent infiltration of sand.
11. The well-driller is required by law to submit a report concerning the drilling for water to the Department of Natural Resources using the proper form. A report must also be submitted to the Establishment Section of the Department of Agriculture and Colonization which partly subsidizes the work.
12. The Department will consider a well to be successful if it has a flow of at least one hundred gallons per hour of water that is fit for consumption.
13. The well-driller must possess suitable equipment to give entire satisfaction to the farmer and the Department. Any complaint substantiated against a well-driller will be grounds for action for redress on the part of the Department.

GENERAL REMARKS

1. This assistance policy is administered by the Establishment Section.
2. The Department will fulfil its obligations after one of its representatives has checked the site, depth, and yield of the well. The well-driller must facilitate the inspection of the well by the Department's representative.

The Deputy Minister of Agriculture and Colonization
ERNEST MERCIER, Agronome
QUEBEC, April 1st, 1966

EGG PRICE SUPPORT PROGRAM

Details of a new price support program for eggs have been announced by Agriculture Minister J. J. Greene. The program is for the 12-month period ending next September 30.

Reflecting the trend to larger laying flocks in Canada, the program provides price support for a higher proportion of Grade A Extra Large, Grade A Large, and Grade A Medium size eggs marketed by a producer. The maximum amount of eggs for which a deficiency payment may be made has been raised to 10,000 dozen per producer from the previous ceiling of 4,000 dozen.

Producers marketing a minimum of 500 dozen eggs during the 12 months will be covered by the program which provides a support price of 34 cents per dozen for the first 4,000 dozen,
(continued on page 21)



THE BETTER IMPULSE . . .

News and Views of the Women's Institute of Quebec

THE QWI LEADERSHIP COURSE

We thought you would be interested in a non-member's viewpoint of the Course, so here is Walker Riley's weekly letter to the press under his column called Country Notebook:

I am constantly amazed — and amused — at the remarkable assortment of activities that can befall a farmer, turned agricultural-extension specialist. Don't ask me how it happened, but this past week I found myself standing in front of a classroom full of women (and a very delightful group they were, too) telling them how, with two days training they could go back home and lead their communities out of all their economic and social difficulties. Just as if I know something about it. I can almost hear the echoes of the horse-laugh from my old threshing-gang buddies.

Don't tell anybody, but I enjoyed it. They were a grand bunch. Delegates from all across Quebec, from one end of the road in the north to the tip of the Gaspé, assembled for the Women's Institutes annual Leadership conference at Macdonald College.

Certainly none went home a trained and polished leader, but in the two days we did explore together many of the problems posed for rural communities by a fast-changing agriculture; and I think we were all a bit surprised to find these problems were not unique to our small corner. We found too, that to understand a problem is to lose fear of it, and to lose fear is the first step in finding a solution.

Miss Chevrier, a rural sociologist, whose home was in Pontiac county, set the conference theme with a graphic picture of the change in the agricultural population, of the trend from rural to urban, of the specialization and mechanization in farming, and the accompanying loss of farms, of the increasing difficulty of finding a dividing line between rural and urban. She spoke of the need to train youngsters to be fitted and flexible in their search for careers, and of the changing attitudes and values in the rural communities.

The discussion groups which followed dug into the problems arising from these changes — the difficulties of transporting pupils a hundred miles to school, the hardships imposed by higher

production costs and constant returns, the problems of distant markets; and in some cases there were suggestions for solution and action.

Similarly, Jack Cram, Senior Editor of the Family Herald, set the stage for a discussion of feeding the world's hungry, while at the same time keeping bread and butter on our own tables.

Prof. Arch Jones took on that aspect of change, the increasing need for recreational facilities and the necessity of utilizing all our renewable resources to the best advantage. To illustrate his points, he took the delegates to the Morgan Arboretum where he practices what he preaches.

Prof. John Agilvie, for his part, undertook to break into manageable parts a very serious problem of change — pollution. Pollution of our beautiful lakes and rivers, and pollution of the air. Nor could all the blame go to the large communities on the riverside, John pointed out. Pollution was also manure piles on the banks of creeks, insecticide bags tossed into the ditch, drifts from crop spraying, silt from eroded fields. Pollution, he said, was not the other fellow's responsibility, but resulted from the accumulated carelessness of a crowded society. It was a problem to be accepted equally by the small community.

Then Dr. Howard Stepler, in his banquet address, gave an encouraging picture of the future of agriculture, a changed agriculture, it is true, he said, but still a vigorous and prosperous industry, embracing a greatly broadened and challenging field. It will demand men highly trained in their specialties, and men able to put these specialties together into meaningful practice.

Dr. Stepler startled the group when he pointed out the world population had increased by 2500 people during his short address.

Whether or not the ladies found the course worthwhile, I don't know. But I can tell you I learned fast for those two days.

Mr. Riley is Acting-Director of the Extension Dept. of Macdonald College.

FROM THE OFFICE

The Essay Competition for the next ACWW Triennial period 1965-1968 has been announced. It is — "My Hopes

for the Future" — a letter from a mother to a daughter.

1. **Date and number of entries** — The three winning essays from each society to be sent to ACWW by Nov. 30, 1967.
2. **Copyright** — the copyright belongs to ACWW, and the entries must not be made public in any form before the competition judging.
3. **Translation** — if in a language other than English, must be translated into English before submission to ACWW.

RULES

1. Essays must be accompanied by full names and addresses of author.
2. Must not exceed 1500 words.
3. Written in ink or typed, using one side of paper only.

Results will be announced before the 1968 Conference. Judges decision is final.

1st prize: £10; 2nd prize £6; 3rd prize £4.

KEY TO GERIATRIC CARE

One of the greatest problems of today's society is to match our social growth with our medical advancement.

Research programmes for the purpose of promoting greater understanding of older people, providing practical advice, preventing infirmities, improving living conditions, providing opportunities for employment, education and recreation would be a step taken towards the solution of the problem of old age.

Much of the mental illness suffered by older people is not due to physical deterioration but to emotional frustration and loss of status and recognition. One study corrects the misconceptions that occupational productivity is reduced by age. Continued exploration of the psychology of aging will make the aged more useful to themselves and to society.

Lack of funds is the greatest obstacle to community planning. Government grants to erect and operate homes for the aged, with provision for the care of the chronically ill, separate units such as low cost housing for those who wish and who are able, from a health standpoint, to live independently are greatly needed. The feeling of being independent and self-sustaining gives the

greatest satisfaction and happiness to the older person.

The key to good geriatric care is considered to be adequate preparation during the pre-geriatric years. Many of the intangible facets of old age frailty follow years of poor nutrition and a lack of physical fitness program.

Education for growing old is a cultural need.

Audrey E. Jacques

Former QWI Convenor of Welfare & Health.

ACWW MEMBER COUNTRIES

You will be reading about the ACWW Conference held in Dublin in September of this year and will be interested to know how many countries have membership in this organization. Here is the list to date:

Australia, Basutoland, Belgium, Brazil, British Guiana, Canada, Ceylon, Colombia, Denmark, England & Wales, Finland, France, Germany, Greenland, Grenada, India, Indonesia, Ireland, Italy, Jamaica, Jordan, Kenya, Kuwait, Laos, Lebanon, Malawi, Malaya, The Netherlands, New Zealand, Nigeria, Northern Ireland, Norway, Pakistan, Papua & New Guinea, Phillippines, Rhodesia, Sarawak, Scotland, Sierra Leone, Sikkim, South Africa - Republic of South West Africa, St. Kitts (B.W.I.), Swaziland, Sweden, Switzerland, Thailand, Trinidad & Tobago, Uganda, United States, W. Cameroon, Zambia.

WORLD FOOD PROGRAM CONFERENCE

UNITED NATIONS, New York — Canada's Agriculture Minister J. J. Greene was chosen chairman of the UN/FAO World Food Program Pledging Conference which opened here recently.

Jointly sponsored by the United Nations and the Food and Agriculture Organization (FAO), the World Food Program aims at meeting emergency food needs, assisting in pre-school and school feeding, and using food as an aid to economic and social development.

As head of the Canadian delegation, Mr. Greene formally pledged \$27,500,000 in U.S. funds, (almost \$30 million Canadian) to the program as Canada's share over the next three years. This represents a four-fold increase for this country over the initial three-year contribution. Three quarters of the Canadian contribution will be in commodities and the remainder in cash.

In December 1965, the UN and FAO Conferences approved the extension of the World Food Program and agreed to a target of \$275 million (U.S.) for the next three years.

MOTHS PREFER LIGHT TO FEMALE SCENTS

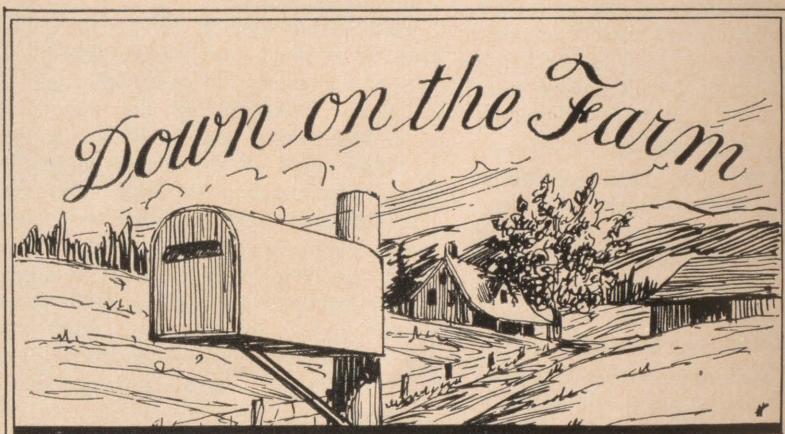
Although the ability of male moths to locate females at a considerable distance is well established, there is no general agreement as to how they do it. The recent realization by entomologists of the importance of chemical signals, now termed pheromones, in certain facets of the life of insects (such as in the organization of honey bee societies), has led to the idea that some such chemical signal may be operative in this case also. That this hypothesis gives only a partial account of the situation, at best, is clear from results obtained by H. H. Shorey and L. K. Gaston of the University of California, Riverside.

They arranged a flight tunnel so that male Cabbage Loopers (*Trichoplusia ni*) had a choice between orienting themselves either towards the source of an air current containing

the apparent female sex pheromone or towards a dim incandescent light. If the light and the pheromone were both present, the moths congregated at the light and paid little or no attention to the chemical.

This observation tallies with some made many years ago by Fabre, who found that male peacock moths were diverted from females by light. It supports a recent suggestion by a US Department of Agriculture scientist, Dr. P. S. Callahan, to the effect that the location of female moths by males depends mainly on far-infrared radiation proceeding from the thoraxes of the females, heated by the activity of their flight muscles, and that pheromones only operate over a short range, as releasers of sexual behaviour.

(*Annals of the Entomological Society of America*, Vol. 58, p. 727).



by Norma E. Holmes

(Repeated by request)

As I had 5 days in London before starting my bus tour of the Continent (Ahem!) I took two tours of the city — West End in an afternoon and the Old City one forenoon, complete with the Tower (chopping block and axe and the spot where they removed Anne Boleyn's head along with others), Beef-eaters — and rain, Old Curiosity Shop, etc. — and rain. A whole day to Windsor Castle and Hampton Court and Eton College, passing Runnymede, just a small field, where the Magna Carta was signed. Saw the State Apartments in Windsor Castle, paintings, gold leaf, and rather worn velvet and brocade upholstery, chandeliers and apparently one fireplace — at least in early days — to heat each room. I asked the Tour Office clerk if he had any royal relatives and he said not that he knew of, but I said, 'You never know. I saw your picture in a painting in one of

the rooms'. We had two very witty guides who added spice to our tours. It was too late to get into Eton College itself, but we got a lecture on the excellence of its training from our guide in the quadrangle, or whatever you call it, which, were it on a North American campus, the parents would have had torn down long ago as being completely unsuitable — especially for wealthy children, which these mostly are. The boys are from 12 to 17 and very carefully screened as to scholastic ability for entrance. It was founded by Henry VI in 1440-41. They were dressed (the original boys, 70, were chosen from poor families) in mourning by order of Geo. III — tail coats, striped trousers, silk hats, etc — for who (?) Then George up and died and as there was none to tell them to stop mourning, they are still at it.

— Eloise

The Month With The W. I.

ABITIBI : Malartic continue improving their beach site and this summer will provide better sanitary facilities; gave prize for Mother's Day; games with prizes at Annual Meeting.

ARGENTEUIL : Arundel celebrated 20th Anniversary, and honoured 12 charter members; raised funds for this event by holding "blind auction"; gave useful household hints. **Brownsburg** had as guest speaker, Dr. S. MacKimmie who spoke on Heart Diseases; held Anniversary Supper commemorating 40th Anniversary, with catering by Frontier who were originally part of this branch; worked on play; adopted Forgotten Patient at Douglas Hospital.

Dalesville-Louisa: What vocation you would choose if you were present-day teen-ager was roll call; discussed Christmas Stockings, Short Courses at MacDonald, Senior Citizens Home; collected empty spools for Children's Handicraft; quiz on W.I. **Frontier** heard informative talk by Mr. G. McGibbon on legal aspects pertaining to Agriculture; sale of plants, bulbs, slips; named favourite tree or flower; held grandmothers' meeting. **Jerusalem-Bethany's** guest showed slides of Botanical Gardens, and Holidays in Florida; told something special learned in past year; passed on favourite recipe to person sitting next; each member to make apron from material in Institute colours; slides shown and talk given by Mrs R Bailey on her visit to Ethiopia, France and Greece. **Lachute** enjoyed Mrs R Bailey's talk on Addis Abbaba, Ethiopia; News quiz held, with Mrs G Davidson winning prize of day ticket to Expo 67. **Lakefield** held discussion on Sunday voting; fair work displayed; flower slips exchanged. **Morin Heights** heard talk and films on gardening, care of house plants and flowers by Mr. M. Habrill Evergreen Nurseries, Mille Isle. **Pioneer** has a guest, Miss Allen, R.N., of the Smith Clinic, Hawkesbury, who read paper on Retirement, Good or Bad for your Health; practising play for Drama competition; Mrs George Rogers presented with an FWIC pin, in recognition of her untiring service to the branch; each member to buy a Canadian Flag before Centennial year; sale of plants and bulbs; warm welcome extended to four new members. **Upper**

Lachute East End had as guest Dr. G R Rigby, who showed slides on Wild Flowers in Canada; Mrs. S Hume reported on Board meeting.

BONAVENTURE : Black Cape saw film "Spruce Bog" emphasizing forest conservation; named Canadian tree and what it is used for; Mrs N Campbell to attend Leadership Course. **Grand Cascapedia** held social evening to raise funds; named and described a bird; contest on W I. **Port Daniel** answered roll with What Talent Did I Use Today; display by members of articles made during the winter. **Restigouche** was hostess branch for County Convention.

BROME : Abercorn entertained Mrs Patton, County President, who spoke on Conveners' duties in particular, and other W I topics; each member gave ideas on how to keep the countryside clean and beautiful, with good suggestions and discussion; \$25 scholarship to Gr. 11 student to be continued; local newspaper credited the branch with \$1000 more in their treasury than the annual report showed! **Austin** have chosen "New Flag" as branch project for Centennial; birthday cake to Mrs D Patterson, gifts to retiring officers; electric blender donated to Cecil Butters Home; cotton for cancer; used Christmas cards sent to England, Korea, Trinidad. **Knowlton's Landing's** Centennial plans are to clean and beautify Club Room grounds, and to improve grounds at the old cemetery on the Glenbrook Farm; **South Bolton** donated to burned-out member's family in Mansonville. **Sutton** has started a fund for purchase of Encyclopedia Britannica for Sutton Library; presented a play at County Convention which was most successful; coloured slides shown of surrounding countryside, with special attention to flower gardens; roll call gave landscaping ideas for home and community; knitted sweaters completed for Red Cross.

CHATEAUGUAY - HUNTINGDON : **Aubrey-Riverfield** heard Mrs Fearn, Executive Director, Barrie Memorial Hospital, speaking on Public Health: told of her trip to Sweden and to Russia as one of party of doctors and hospital administrators from all over the world,

studying new methods of public health and hospital work; white elephant and plant sale held. **Dundee:** Mrs J Platt showed samples and souvenirs brought from Florida, including white sand, Spanish Moss, pictures, costume jewelry, etc. **Hemmingford** went with UCW to local florist's shop and greenhouse for demonstration of flower arrangements, (table sprays, table centre, basket, corsage); report of Open House at Douglas Hospital by several members who attended; slides shown of Puerto Rico and Quebec. **Howick:** Miss P. Root gave talk on United Nations Seminar she attended last year; Mrs J D Lang gave demonstration of rug making — and was then honoured by members for her many years of faithful service to W I. contest on aprons; **Huntingdon** welcomed a new member; held a Stanley party, with many valuable cleaning helps learned; sale of plants; receiving applications for their scholarship loan. **Ormstown:** Mr A K English talked on Bees, their habits and enemies, how to care for them, and kinds of honey, followed by questions and answers; approached Park Committee re planting of a W I Tree in Park, as Centennial Project; arranged Salvation Army collection.

COMPTON: All branches report sending clothing to Save the Children Fund; most have had or are planning paper drives. **Brookbury** donated to Cancer Society, in memory of their late member, Mrs Lionel Allison; entertained County Convention. **Bury** held series of card parties with successful results; Mrs S Doutherty talked on Modern Fabrics and Their Care, followed by contest indentifying samples of materials — 2 members identified all correctly. **Canterbury** disclosed names of their "Sisters-Sue" and chose new ones for next year. **East Angus** met with Town Council to discuss plans for a community Centennial project. **East Clifton :** Mrs I McBurney talked on Sandwich Making; purchased Melmac bowls and platters for their community hall. Sawyerville entertained members of Cercle de Fermières; held demonstration of sandwich making. **Scotstown** selling tickets to Expo.

GA SPE: **Douglastown** welcomed a new member; members made knitted mittens for needy children; for roll call, an-

swered a riddle. **Gaspe:** for roll call gave a casserole recipe; good papers by conveners on "Wife Preserves", Are Stay-at-Home Mothers beyond Price? Respect for Adults; Call Ring in a High School; Baby shower for member held.

GATINEAU: Aylmer East: Mrs C. Faris spoke on Value of Good Seed in Agriculture; roll call — a vegetable corsage; Centennial tree planted at each of the 5 churches in Aylmer; auction sale of food, plants and kitchen gadgets; contest with bulbs for prizes. **Rupert:** Mr Titley, Agric. Representative for Gatineau Co., spoke on "Farming of T-Day"; flowering trees purchased and planted in the Rupert Cemetery; Guess what's in the Parcel contest; gave a Spring Recipe. **Wakefield** donated to Gatineau Memorial Hospital in memory of Dr H Geggie; canvassed for Cancer Society.

MISSISQUOI: All branches report arrangements for coming Drama Contest. **Cowansville** discussed sale of Centennial Rose in aid of Retarded Children. **Fordyce** heard lecture on new methods of teaching arithmetic; viewed demonstration of use of tape recorder to teach French and multiplication tables; enjoyed contests on Famous People and on Potatoes. **Stanbridge East** welcomed four new members; gave hints on gardening; contest on varieties of trees; successful food sale.

MONTCALM: Rawdon: Mrs G. Robertson, RN., proprietress of Heather Hospital, Rawdon, spoke on all that is involved in proper care of convalescent and chronically ill patients, including importance of arranging that patients make wills, or arrange Powers of Attorney; enjoyed a special meeting with QWI President, Mrs. Ossington as guest speaker; roll call answered by a sentence in French.

PAPINEAU: Lochaber: Mrs McNamara displayed 3 more quilts she has made for Unitarian Service, quilts made from old coats and woollens; flower sent to hospitalized member; discussed items from Semi-Annual Report. luck supper.

PONTIAC: Bristol: Mr D Hodgins spoke on Agriculture, encouraging young people to stay in this field, and to learn new methods of farming; word contest with plants as prizes; sale of plants and bulbs; held pot luck supper; at a later meeting their guest speaker was a bank manager, speaking on banking; are planting a red maple in the

Memorial Park as Centennial project. **Clarendon** held sale of 25¢ articles. **Fort Coulonge** went on tour of the Argue Greenhouses in Shawville; named birth stone and flower; donated to Red Cross; held meeting in school where teachers showed films; planted flowers and shrubs in cemetery as Centennial project. **Quyon:** Mr Murdock of Dept. of External Affairs, spoke on his impressions of Turkey where he spent 2 years, describing living conditions and farming; demonstration of Tupperware; auction of slips and plants; 2 members received ACWW pins for perfect attendance; 4 who have been members for 10 years were presented with floral brooches. **Wyman:** auction of slips and plants; passed around money apron for hospital; some members collected for Red Cross; held pot

QUEBEC: Valcartier: Flowering crab-apple trees were planted in W I grounds, and repairs made to W I Canteen as Centennial project; donated to Public Speaking Contest in school; held shower of aprons for Labour Day Bazaar; enjoyed visit of QWI Officer, Mrs V R Beattie, accompanied by Mrs Parkes; slides shown on scenery around Valcartier; gifts sent to shut-ins; Convener of Citizenship gave talk on South Africa.

RICHMOND: Cleveland: contest on articles made from rick-rack braid, with prize for most original article to Mrs R Taylor, and best workmanship to Mrs C Pease; sale of plants and slips. **Denison's Mills:** started window box contest; slip and bulbs sold. **Gore:** papers on Carelessness on the Farm, and Plain Talk; renewed CAC membership; donated to March of Dimes and Red Cross; sent plant to hospitalized member. **Melbourne Ridge** were given Centennial pins by Publicity convener, who had obtained them from Centennial Commission; seeds to members' children distributed, and prize lists given to members; sale of slips and bulbs. **Richmond Hill** held bridal shower for members daughter; cookie contest won by Mrs E Smith and Mrs V Farrant; donated to Historical Society; sale of slips and bulbs; sold cloth which had been donated and raised good sum; remembered birthday of child in Dixville Home. **Richmond Young Women** heard several interesting items, read by Citizenship Convener, Mrs W Crock. **Shipton:** contest on current events, won Mrs. W. Tremblay; guessing contest won by Mrs J Saffin. **Spooner Pond:** sale of plants and of remnants; wedding gift to member's daughter; card sent to hospitalized member.

ROUVILLE: Abbotsford: Mrs H. Ellard was interesting visitor, giving refreshing advice, spiced with humour, pointing out new ways Institute can be of community service; branch submitted brief to Royal Commission on Agriculture, covering production of apples in this district.

SHEFFORD: Granby West held a Tea; made 10 blankets for Cecil Butters Home; gave world news items as roll call. **Waterloo - Warden** entertained County meeting; letter read from Pen Pal in England; sale of plants and bulbs

SHERBROOKE: Ascot: wool given out to knit socks for welfare; cookie contest with prize for rolled and drop cookies. **Belvedere:** Members purchased Centennial Rose Bushes "Miss Canada"; exchanged slips and bulbs; Mrs C Putnam presented with a 25 — year pin; selling Expo tickets; penny sale was both amusing and profitable; 12 pair socks knitted for welfare. **Brompton Rd:** held Knick-Knack sale; held 2 card parties; worked at Cancer Clinic; held a bee to clean the community hall. **Lennoxville:** coloured slides shown of flowers at Saanichton Experimental Farm, and of Beaucart Gardens, B.C.; green thumb hints given; contests held on wood, bark and twig exhibits; took part in County contest on candy and embroidered cushion; donated to Maplemont Home; purchased new flag; worked at Cancer Dressing Station. **Milby** heard member's account of her trip to Florida, with snaps and picture postcards shown, and shells displayed.

STANSTEAD: Mrs E Woodward and Mrs L Mueller have written Centennial poems; Hatley entertained County Meeting, where Pres, Mrs J Ossington was guest. Mrs M Knight and Miss V Moranville were honoured with Life Memberships; County scrapbook to be assembled, kept by Mrs W Dustin, and Miss E. Miller. **Beebe:** discussions on how to improve homes for Centennial; held essay contests in their local school, with prizes given; letter sent to M.P. protesting inhuman slaughter of seals; catered at Fish and Game Club. **Hatley** named a famous Canadian; donated to School Fair; pot holder contest and sale, Mrs Roarke winning first. **North Hatley** exchanged slips; silver contribution for school fair prizes; quiz on Provincial emblems. **Stanstead North** named birthplace of member's mother; very successful Rummage Sale held; clothing sent to Douglas Hospital; held Family Supper.

EGG —

(continued from page 16)

and 31 cents for each additional dozen up to the maximum of 10,000.

Egg prices have been supported at 34 cents per dozen for the past three years. Total cost of a 4.3 cents per dozen deficiency payment for the 1964-65 support year is estimated at \$1.8 million.

In addition to marketing at least 500 dozen eggs, a producer to be eligible for a deficiency payment must be registered with the Agricultural Stabilization Board and must have sold eggs through an approved grading station, or be a registered producer-grader selling directly to retail outlets.

INTERNATIONAL RICE YEAR

The Food and Agriculture Organization of the United Nations has proclaimed 1966 as International Rice Year (IRY).

The IRY theme is that the output of this crop can, and must, be greatly increased because rice is now the main food of more than a third of the world's population. At the current rate of population growth that third will have become more than half by the end of the century. Within the working lifetime of children now being born, the population of the rice-eating East is likely to vastly exceed the population of the rest of the world. Because the rice-eating countries have the fastest growth rate, they are more exposed to malnutrition and even famine.

The message of the Rice Year is that the old ways will no longer do. People in rice-producing countries must use every means to get the most from the rice crop. Until now, except in a very few countries, neither science nor technology has kept pace with plow

In bold attempts to feed its bursting populations, Asia has in a decade added more than 25 million acres to her rice paddy; Latin America, more than 4 million acres; and Africa about three quarters of a million acres. In every country aiming at self-sufficiency, a ton saved is a ton gained, with an immediate benefit to the economy. This can be achieved by various programs covering every aspect of the agronomy of rice, from plant breeding and seed production to proper storage and milling methods.

These are the main objectives FAO would like to accomplish in the foreseeable future, together with improved trade opportunities, especially within developing countries themselves. That is the message International Rice Year wants to convey to Asian countries and to the whole world.

COMPARATIVELY LOW PRICES OF FARM PRODUCTS

Are livestock and meat prices really "high"? The Chicago Drovers Journal points out that while prices are higher than they have been for many months, values cannot rightly be called "high".

In 1948 (a base year frequently used by economists for comparison purposes), U.S. prices ran about \$1.50 per bu. for corn, \$2.35 for wheat, \$26.00 per cwt. for stock cattle, and \$20.00 per cwt. for hogs (live).

In the 15 years following 1948 the basic interest rate on U.S. government debentures increased 150% and added another 50% in fringe benefits. Industrial prices have increased from 50 to 100% depending on the particular item involved. The automobile worker can now retire at 60 years of age making more than the average farmer made in Kansas in 1964 working full time.

Had agricultural prices kept up with the rest of the economy, the average price of stock cattle today would be \$65.00 per cwt. hogs would be \$50.00 per cwt. (live), corn would be \$3.75 per bu., and wheat would bring \$5.75 per bu. From these figures it is easy to see that agricultural prices have remained the same or in many cases have actually decreased while labor, interest, and industrial prices more than doubled in many areas. There has been recent improvement (in stock cattle prices for instance), but this is a far cry from the

(continued on page 23)

WOOL DEFICIENCY PAYMENT

A deficiency payment of 16.3 cents per pound for wool was announced today by Agriculture Minister J. J. Greene.

The payment applies to eligible grades of wool marketed by producers in the 1965-66 support year ending today.

Volume of wool graded and eligible for the payment in the 12-month period is estimated at slightly more than four million pounds. Payments to some 24,000 producers will amount to approximately \$655,000.

The deficiency payment represents the amount by which the average return to producers fell short of the support, or floor price of 60 cents. Calculation of the average return is based on prices for a representative number of grades.

In 1964-65, a payment of 12.3 cents per pound was made on 4.5 million pounds of wool.

To receive payment, a producer must have marketed a minimum of 20 pounds of eligible wool through a registered warehouse.



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GRADUATION '66

Graduation is over for another year, and 552 young people have left Macdonald with degrees from the two faculties and the School of Household Science.

Twenty-seven women graduated from the School of Household Science. Among the most honoured graduates was Miss Barbara Prescott of Sackville, N.B. Barbara obtained first class honours, and was awarded the Governor General's Medal, the Harrison Memorial Prize, and the honour of University Scholar.



AUDRY PAYNE

Sixty students, including several women, graduated from the faculty of Agriculture. Miss Audry Payne, of Truro, N.S., topped the award list with first class honours, the honour of University Scholar, the Stern Cup, and the Governor General's Medal.



BARBARA PRESCOTT

The faculty of Education, with a greater enrollment and shorter classes, graduated 455 students with various teaching degrees and diplomas. Among the scholars of that faculty were Miss Tanya Galt of Montreal, with 4 awards, and Miss Margaret Gavan of Lachine, with 3 awards.

FARM WRITERS CONGRESS

Five hundred farm writers and broadcasters from at least 15 countries are expected to take part in the INTERNATIONAL CONGRESS OF FARM WRITERS, to be held at Macdonald College on June 18-21, 1967. The Congress has two main purposes — to focus the eyes and the ears of the world on the increasingly critical situation in food and agriculture, and to consider ways in which farm writers can best help to speed a solution.

NEW POST FOR OLD GRAD

Keith Bradley, 1949 graduate of Macdonald College, has been appointed coordinator of community development services in the Rural Development Branch of the Department of Forestry.

His duties include co-ordination of community development activities and participation in the formulation of national policy and programs aimed at increasing income and employment opportunities for rural people.

Mr. Bradley was an agronomist with the Quebec Department of Agriculture at Knowlton in Brome County before going to the University of Vermont for his master's degree in Extension Education. For the last two years, he has been employed as the first Area Resource Development Specialist in Vermont.

WOODLOT MANAGEMENT DEPT.

The Woodlot Management Dept. has been busy in recent months. Profs. Jones, Bider and McCartney have been participating in a course organized by Dr. V. R. Vicker of the Lyman Museum to prepare Boy Scouts to qualify for various conservation badges.

Prof. Jones addressed the Q.W.I. Leadership Conference May 26, on the topic "Changing Attitudes to Recreation & Natural Resources."

Dr. W. H. Brittain, Scientific Advisor, continues his work with white birch species and in preparation and development of his Centennial Birch Trail.

COLLEGE TOURS

A series of 7 educational visits to the Morgan Arboretum and the College farm was recently sponsored by several industrial companies. The visitors, French speaking Montreal youth, were generally members of "4H" Clubs or "La Jeune Association Forestière Québécoise." It was a thrill to see a city 4-H'er close to his first calf.

LOW PRICES —

(continued from page 21)

\$65.00 per cwt. that would have been necessary to keep us on a parity with other segments of the economy in the last 15 years.

Let consumers understand that meat prices have not skyrocketed in the sense that they have risen out of all reason, suggests the Journal. Meat, in fact, is still a good buy. Prices are up, but "high" is a complete misnomer in this case.

BULLETIN ON MASTITIS

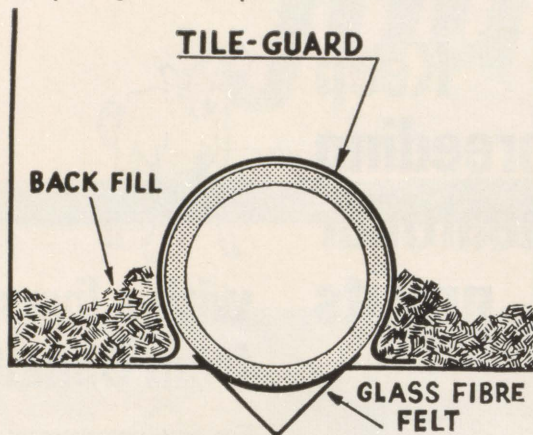
A bulletin entitled "Infectious Mastitis of Dairy Cattle" dealing with the causes and prevention of this troublesome disease in dairy herds is available in English (Publication 266A) and in French, from the Publications section of the Quebec Department of Agriculture and Colonization. The emphasis in this work is placed on prevention through good management. Conditions predisposing dairy cattle to infection by mastitis are listed as follows:

1. Bruises, cracks, chapping, knocks, draughts, scratches, sores, lacerations, crushing, and wounds of all kinds;
2. Dirty stalls;
3. Cold floors without litter;
4. Allowing cows to be sucked by calves that are too big;
5. Mechanical milkers in poor condition;
6. Incomplete stripping, especially after machine milking;
7. Introduction of infectious germs by contaminated milking tubes, teat dilators, teat tubes, and syringes;
8. Feeding mouldy or frozen fodder;
9. Concomitant or predisposing diseases such as brucellosis, leptospirosis, metritis (inflammation of the womb), and other infections which may lead to secondary mastitis;
10. Overfeeding or a diet that is too rich in proteins, especially around calving time;
11. Overstraining the animal, for instance by frequent calvings, prolonged lactation periods, and high milk production;
12. Severe selection for highly specialized purposes.

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